

ABSTRACT OF THE DISCLOSURE

A method for channel allocation in an ad-hoc radio communication system includes devices gathered in several piconets. A piconet coordinator (PNC) is defined for each of the several piconets. A Code Division Multiple Access (CDMA) scheme is implemented. The set of available codes is split into pre-defined disjointed subsets of codes (C_i) known by each device. For each new device added in the system, the new device scans its radio environment looking for at least one used subset of codes (C_i) which is associated with an existing piconet. If no used subset of codes (C_i) is found by the scanning, the new device becomes a piconet coordinator (PNC) of a newly established piconet. On the other hand, if a used subset or subsets of codes (C_i) are found by the scanning, the new device joins an existing piconet among a set of available piconets found to be using the subsets of codes (C_i).